

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION RC-391

Effective October 1, 2013

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **May 2016**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Classic Rib 29 gauge Metal Roof Panels over 2x4 Wood Purlins manufactured by:

Metal Sales Manufacturing Corporation
3838 North General Bruce Drive
Temple, Texas 76501-6505
(254) 791-6550

is acceptable in designated catastrophe zones along the Texas Gulf Coast when installed in accordance with the distributor's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The Classic Rib metal roof panels are minimum 29 gauge (0.0134" thick) steel with minimum yield strength of 80 ksi and a galvalume or galvanized coating. The metal roof panels have ribs $\frac{3}{4}$ inch high and spaced 9 inches on center. The metal roof panels conform to ASTM A 792 or ASTM A 653 and may be prepainted.

LIMITATIONS

Roof Framing: The metal roof panels shall be installed over nominal 2x4 No. 2 Southern Yellow Pine wood purlins. The wood purlins shall be secured to minimum Southern Yellow Pine roof framing members (rafters or trusses). The roof framing shall not exceed 24 inches on center. A solid roof deck is not required. Thicker wood purlins may be used; however, the design pressure rating for the metal roof panels shall be as specified in this evaluation report.

New Roof Framing Attachment: The roof framing shall meet or exceed the uplift requirements of the International Residential Code or International Building Code and shall be installed as required for resistance to wind loads.

Design Wind Pressures: The design pressure uplift load resistance shall be as specified in Table 1.

Roof Slope: The metal roofing panels may be installed on roofs with a roof slope as low as $\frac{1}{2}$:12 if sealant is used on the side laps. If sealant is not used on the panel side laps, the minimum roof slope is 3:12. Application of the sealant shall be in accordance with the manufacturer's installation instructions and the Metal Sales Classic Rib Metal Roof Panel Details.

Table 1
Attachment of minimum 29 gauge Classic Rib Metal Roof Panels to
Minimum 2x4 No. 2 Southern Yellow Pine Wood Purlins:

Design Wind Pressure (psf)	Attachment of Roof Panel to Wood Purlins
-128.3	Fastening Pattern #1 @ 2'-0" on center

Installation Over an Existing Roof Covering: Installation over an existing roof covering is limited to a maximum of one layer of composition shingles, wood shingles or shakes, built-up roofing or roll roofing applied over an existing solid roof deck. The wood purlins shall be secured to the wood rafters or trusses using two (2) minimum No. 8 wood screws. The fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the roof framing. The roof framing shall be a minimum Southern Yellow Pine dimension lumber. NOTE: underlayment is not required to be installed.

INSTALLATION INSTRUCTIONS

General: The metal roof panels shall be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Underlayment: For installations over a solid deck. If used, then a minimum of one layer of No. 30 (Type II) asphalt felt shall be used. The underlayment used shall comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed with 6-inch side laps and 3-inch end laps. The underlayment shall be applied with corrosion-resistant roofing nails spaced a maximum of 36 inches on center along the side laps.

Wood Purlins: The wood purlins shall be secured to wood rafter or trusses using two (2) minimum No. 8 x 2 ½" long wood screws. The fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the roof framing. Roof framing (rafters or trusses) shall not exceed 24 inches on center.

Attachment of Metal Roof Panels to Wood Purlins: The Classic Rib metal roof panels shall be secured to the wood purlins as follows:

Roof Panels to Wood Purlins: Minimum No. 10-14 x 1 ½ inches long wood screws with a sealing washer, manufactured by Atlas. The required fastener patterns are shown in the Metal Sales Classic Rib Metal Roof Panel Details. The required spacing of the fasteners is specified in Table 1.

Panel Ends and End Laps: Minimum No. 10-14 x 1 ½ inches long wood screws with a sealing washer, manufactured by Atlas. The required fastener pattern is shown in the Metal Sales Classic Rib Metal Roof Panel Details.

Panel Side Laps: Minimum ¼"-14 x 7/8 inches long Stitch Screw with a sealing washer. The stitch screws shall be spaced 12 inches on center along the length of the side lap.

Trims, Closures and Accessories: Components, such as eave trim, rake trim, ridge trim, hip trim and valley trim, shall be installed as required by the manufacturer and the Metal Sales Classic Rib Metal Roof Panel Details.

Note: The manufacturer's installation instructions shall be available on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), International Building Code (IBC) and the Texas Revisions.